

## Correspondence

**Penicillin allergy might not be very common in subjects with cephalosporin allergy**

To the Editor:

One of the primary findings of the recent article by Romano et al<sup>1</sup>—that 25 of 98 patients with documented cephalosporin allergy determined by means of skin testing have clinically significant IgE-mediated allergy to penicillin—might be seriously flawed for the following reasons: The threshold used in the article for calling a penicillin skin test result positive was 3 mm, instead of the 5 mm specified in the package insert for Pre-Pen and used in the original articles on penicillin allergy skin testing.<sup>2,3</sup> The use of 3 mm as a positive threshold has been shown to produce much higher rates of positive penicillin skin test results in female subjects compared with use of a 5-mm threshold.<sup>4,5</sup> The commercial anti-penicillin IgE fluorometric enzyme immunoassays used to detect penicillin “allergy” have been shown not to correlate to penicillin skin test results and not to predict positive oral amoxicillin challenge results.<sup>5</sup> The high-dose amoxicillin used (20 mg/mL) for skin testing is an irritating concentration and requires a nonphysiologic pH to stay in solution. Amoxicillin has a U-shaped solubility curve, and the limit of solubility of amoxicillin in water at a pH of 7 is only 4 mg/mL.<sup>6</sup> The solubility of ampicillin is even lower. If these corrections are made to this

article, then the rate of subjects with cephalosporin allergy who do not have a history of penicillin allergy but with true IgE-mediated allergy to penicillin might be much closer to 5%.

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